



INVITATION FOR BID (IFB)

Name of Good or Service Requested: **2022 Deice Truck**

Contents:

- A. Summary of Invitation for Bid
- B. Instructions to Bidders
- C. Contract Requirements and Specifications
- D. Pricing and Addendum
- E. Standard Terms and Conditions
- F. Conditions and Non-Collusion Form
- G. Intent to Respond Form
- H. Questions

Attachment A – Master Q & A Form

Exhibit A – Contract Requirements and Specifications

Exhibit B – Pricing and Addendum



A. Summary of Invitation for Bid

This bid is for the purpose of entering into a contract for a 2022 Deice Truck for the City of Billings' Public Works Department, Streets and Traffic Division. The successful bidder agrees to provide the City of Billings with an acceptable quality of equipment/service, performance and workmanship as determined by the City.

It is the purpose of this bid to obtain the best quality of equipment/service at the most favorable price to the City of Billings. Consideration will be given for the level of service offered and ability to meet stated specifications as outlined in the contract documents.

The lowest bid need not be accepted if it is documented that a specific supplier in the past has been a poor performer or has provided poor goods.

B. Instructions to Bidders

Sealed bids entitled **2022 Deice Truck** for the City of Billings' Public Works Department will be received by the City Clerk up until 2:00 PM (MST) on Tuesday November 16, 2021.

All bids may be submitted to the Billings City Clerk, via email at bids@billingsmt.gov, or via delivery or mail to 210 N. 27th Street, Billings, MT 59101 (P. O. Box 1178, Billings, MT 59103). Bids will be publicly opened and read aloud via Facebook Live on the City's Facebook page: <https://www.facebook.com/Billings-MT-City-Government-74352842013/>. Bid tabulations will be posted for public viewing after the bids have been opened.

More specific additional information regarding this **2022 Deice Truck** may be obtained by contacting Derick Miller via telephone at 406-657-8250, or via email at millerd@billingsmt.gov.

Each bid must be accompanied by a Certified Check, Cashier's Check, or Bid Bond payable to the City of Billings, Montana, in the amount not less than ten percent (10%) of the total amount of the bid. The bid security will be retained by the City Clerk until the successful bidder enters into a contract with the City of Billings. If no contract is entered into, by the successful bidder, within sixty (60) days the security may be forfeited to the City of Billings.



No bids may be withdrawn after the scheduled time for the public opening of bids, which is 2:00 PM (MST) on Tuesday, November 16, 2021



The right is reserved to reject any or all bids received, to waive irregularities, to postpone the award of the contract for a period of not to exceed sixty (60) days, and to accept that bid which is in the best interests of the City of Billings, Montana.

The City of Billings is an Equal Opportunity Employer. The Contractor and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a) and 41 CFR 60-741.5(a), which prohibit discrimination against qualified protected veterans and/or qualified individuals on the basis of disability, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and individuals with disabilities.

EXAMINATION OF DOCUMENTS

Before submitting a bid, the bidder shall:

- a. Carefully examine the Standards and Specifications as well as all other attached documents;
- b. Fully inform themselves of the existing conditions and limitations;
- c. Include with the bid sufficient information to cover all items required in the specifications.

BID COMPLIANCE

It shall be the responsibility of the bidder to see that all bids are submitted to the office of the City Clerk before 2:00 PM (MST) on Tuesday, November 16, 2021.

BID MODIFICATIONS

Bids shall be made on the forms provided herein; they shall not contain any recapitulation of the work to be done. Modifications, additions or changes to the terms and conditions of this Invitation for Bid may be cause for rejection of the bid. Bids submitted on other forms may be rejected.

INTERPRETATION PRIORITY

Should a bidder find discrepancies in, or omissions from, the specifications, or be in doubt as to their meaning, bidder shall notify Derick Miller at 406-657-8250 who will send written instructions or addenda to all bidders. The City will not be responsible for oral interpretation. All addenda issued prior to bid opening shall be incorporated into and become a portion and part of the contract/agreement upon award. Questions received less than ninety-six (96) hours before the bid opening cannot be answered.



WITHDRAWAL OF BIDS

Bidders may withdraw their bid either personally or by written request at any time prior to the time set for bid opening. No bid may be withdrawn or modified after the time set for opening, unless and until the award of the contract is delayed for a period exceeding sixty (60) days.

BID PRICE VALID

Bidders must honor their bid price for sixty (60) days from the date of sealed bid opening.

FUTURE PURCHASES

The bid price will remain in effect for the duration of the model year production and within the manufacturer's capacity to produce the units. The City may place additional orders for vehicles from the prices established as a result of this bid.

The prices established from this bid may be extended to other political subdivisions within the State of Montana solely at the vendor's discretion.

CERTIFICATION

The bidder certifies that the bid has been arrived at by the bidder independently and has been submitted without any collusion designed to limit independent bidding or competition. The bidder further certifies that the materials, products, services and/or goods offered herein meet all requirements of the stated specifications and are equal in quality, value and performance with highest quality, nationally advertised brand and/or trade names.

Manufacturer's trade names, if used in specifications, are for the express purpose of establishing a standard of quality and coordination of design, not for the purpose of limiting competition.

ELIGIBILITY

The successful bidder may be required to provide copies of the following, or the ability to obtain the following within 15 days of notification of contract award:

- Completed and signed new vendor forms, if necessary (to be eligible for payment): <http://mtbillings3.civicplus.com/DocumentCenter/View/26004>
- City of Billings Business License: <http://ci.billings.mt.us/981/Business-Licenses>



- Montana Contractor's License: <http://erd.dli.mt.gov/work-comp-regulations/montana-contractor/construction-contractor-registration>
- Certificate of Workman's Compensation or Certificate of Exemption from Workman's Compensation: <http://erd.dli.mt.gov/work-comp-regulations>

EVIDENCE OF QUALIFICATION

Upon request of the City of Billings, a bidder whose bid is under consideration for award may be required to manifest satisfactory evidence of his financial resources, experience, the organization and equipment as well as service provisions bidder has available or will make available. In determining the lowest responsible bidder, in addition to price, the following considerations may be addressed:

- a) The ability, capacity and skill of the bidder to perform the contract or provide the service required.
- b) The character, integrity, reputation, judgment, experience and efficiency of the bidder.
- c) Whether the bidder can perform the contract within time specified.
- d) The quality of performance of previous contracts, agreements and/or performance.
- e) Previous and/or existing compliance by the bidder with laws relating to the contract or services.
- f) Such other information which may be secured having a bearing on the decision to award the contract.

C. Contract Requirements and Specifications

See Exhibit A.

D. Pricing and Addendum

See Exhibit B.

E. Standard Terms and Conditions

In case of default by the successful bidder or failure to deliver the goods or services within the time specified, the City Purchasing Agent, after written notice, may procure them from other sources and hold contractor responsible for excess costs occasioned thereby.

The specifications attached to the instructions to bidders establish a standard of quality desired by the City of Billings. Any bidder may submit quotations on any article which substantially complies with these specifications as to quality, workmanship and service. The City of Billings reserves the right to make its



selections of materials or services purchased, based on its best judgment as to which articles substantially comply with the requirements of the specifications.

No alteration in any of the terms, conditions, delivery, quality, or specifications will be effective without prior written consent of the City of Billings.

No exception to delivery or service dates shall be allowed unless prior written approval is first obtained from the City of Billings.

The contractor warrants all articles supplied under this contract to conform to specifications, herein. The contractor will deliver a warranty stating that all articles supplied under the contract are fit and sufficient for the purpose manufactured, merchantable, and free from defects.

In the event the City is entitled to a prompt payment or cash discount, the period of computation shall commence on the date of delivery, or receipt of correctly completed invoices, whichever is later. If an adjustment of payment is necessary, the discount period shall commence on the date final approval for payment is authorized.

The contractor agrees not to discriminate against any client, employee or applicant for employment or for services, because of race, creed, color, national origin, sex or age with regard to, but not limited to, the following: employment upgrading; demotion or transfer; recruitment or recruitment advertising; layoffs and termination; rates of pay or other forms of compensation; selection for training; rendition of services. It is further understood that any contractor who is in violation of this shall be barred forthwith from receiving awards of any purchase order for the City unless a satisfactory showing is made that discriminatory practices have terminated and that a reoccurrence of such acts are unlikely.

The City reserves the right to cancel and terminate this contract forthwith upon giving 30 days written notice to the contractor. (This provision does not apply to the purchase of materials and equipment. A purchase order for materials and equipment is a binding contract.)

Should either party employ an attorney or attorneys or utilize the services of in-house attorneys to enforce any of the provisions hereof or to protect its interest in any manner arising under this contract, the non-prevailing party in any action pursued in a court of competent jurisdiction agrees to pay to the prevailing party all reasonable costs, damages, expenses, and attorneys' fees, including fees for in-house attorneys, expended or incurred in connection therewith.

Where applicable, possible or required, bidder is required to submit descriptive literature, sample material, design sketches and detailed shop drawings. Failure to



submit required items may result in rejection of the bid or termination of contract.

The successful bidder may not make any advertising or sale use of the fact that contract items are being used by purchaser and other approved agencies, under penalty of contract termination.

This Agreement shall be construed and enforced in accordance with the laws of the State of Montana. Venue for any suit between the parties arising out of this Agreement shall be the State of Montana Thirteenth Judicial District Court, Yellowstone County.

The contractor may not assign or subcontract the agreement, or the right to receive reasonable performance of any act called for by the contract, shall be deemed waived by a waiver by City of a breach thereof as to any particular transaction or occurrence.

Regardless of FOB point, contractor agrees to bear all risks of loss, injury, or destruction of goods and materials ordered herein and such loss, injury, or destruction shall not release contractor from any obligation hereunder.

All materials submitted in response to this IFB become public records under Article II, Section 9 of the Montana Constitution and §§ 2-6-102 and 7-1-4144, MCA and may be distributed by written request pursuant to Montana's Constitutional Right to Know or Public Records Acts.

Information provided in response to this IFB will be held in confidence and will not be revealed or discussed with competitors prior to award of Contract by Council. However, one copy of each bid submitted shall be retained for the official files of the Department and will become public record after award of the Contract.

Records and materials that are constitutionally protected from disclosure are not subject to the provisions of this section.



F. Conditions and Non-Collusion Agreement

To receive consideration, this form must be signed in full by a responsible, authorized agent, officer, employee or representative of your firm.

CONDITIONS AND NON-COLLUSION AGREEMENT

We have read and agree to the conditions and stipulations contained herein and to the Standard Terms and Conditions contained on the attached.

We further agree to furnish the product/services specified at the prices stated herein. We additionally agree to deliver the products/services to the location and by the date set forth herein, if applicable.

In signing this bid, you also certify that you have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a bid; that this bid has been independently arrived at without collusion with any other bidder, competitor or potential competitor; that this bid has not been knowingly disclosed prior to the opening of bids to any other bidder or competitor; that the above statement is accurate under penalty of perjury.

Legal Name of Firm/Corporation

Authorized Signature

Address

Printed Name

City/State/Zip

Title

Date

Telephone Number



G. Intent to Respond Form

Email the following Intent to Respond form to Derick Miller within two (2) days of the Bid Opening date of November 16, 2021 even if your company chooses NOT to participate.

To: City of Billings – PW – Streets & Traffic
Attn: Derick Miller
Phone: 406-657-8250
Email: millerd@billingsmt.gov

From: _____ Contact Name

_____ Company Name

_____ Company Address

_____ Email Address

_____ Phone Number

_____ Fax Number

Please indicate whether or not you intend to submit a bid on: 2022 Deice Truck by checking Yes or No.

We intend to respond by the specified due date:

Yes _____ No _____

_____ Company Name

_____ Date

_____ Contact Name (please print)

_____ Title

_____ Signature of Contact Position

By signing the above, I certify that I am authorized by the Company named above to respond to this request.



H. Questions

Questions regarding this Invitation for Bids must be sent to the contact person listed in Section B no later than 5 business days prior to due date. The City will make every effort to provide a written response within 2 business days. Whenever responses to inquiries would constitute a modification or addition to the original IFB, the reply will be made in the form of an addendum to the IFB, a copy of which will be posted on the City's website and forwarded to all Suppliers who have submitted an "Intent to Respond" form (Section G).

Supplier must submit their questions via email using the "Master Q & A" form found below (Attachment A), and provide, at a minimum, the following:

- Supplier's name, requester, and appropriate contact information.
- The question, clearly stated.
- Specific reference to the applicable IFB section(s).



ATTACHMENT A

MASTER Q & A FORM

IFB: 2022 Deice Truck

Master Q&A	Any questions regarding this IFB should be submitted according to the process outlined below. The City will make every effort to answer within two (2) days of receiving the questions.
Q&A Process	<ol style="list-style-type: none">1. Prepare questions or concerns on the template provided.2. Complete the table in full, providing a date for each question and a section of the IFB to reference (if applicable).3. Submit the completed form via email to millerd@billingsmt.gov. Attach associated documents as necessary. <p>Please contact Derick Miller with any questions regarding this process.</p>

Questions from: _____ **Company:** _____

#	Date	Reference Section	Question or Comment	City Response
1				
2				
3				
4				

Email Address: _____



EXHIBIT A

CONTRACT REQUIREMENTS AND SPECIFICATIONS

ONE (1) NEW CURRENT MODEL 2022, 56000 GVW CAB & CHASSIS WITH CURRENT MODEL 3000 GALLON CHEMICAL/FLUSHER LIQUID TANK UNIT

<u>DESCRIPTION</u>	<u>MINIMUM REQUIRED (EXCEPT AS NOTED)</u>	<u>SPECIFICATION BID</u>
ENGINE	Minimum 350 HP diesel; @ 1400 RPM List engine & horsepower 1150 Ft. pounds Torque @ 1400 RPM	_____
	Fuel/water separator, Racor or equal with warning light. Low oil, high temp., low water, engine shut-down.	_____
GROSS VEHICLE WEIGHT	56,000	_____
WHEELBASE	177" (F/A to center R/A Trunnion) Max.	_____
BUMPER TO BACK OF CAB	114" Max.	_____
CAB TO AXLE	112"	_____
FRAME	RBM OF 1,893,000 LBF-inches per rail minimum.	_____
	2 Front tow hooks	_____
FRONT AXLE	16,000 pounds, front shock absorbers, power steering	_____
REAR AXLE	40,000 pounds tandem 5.65 ratio, controlled differential lock	_____
SUSPENSION	To match G.V.W. Rating	_____
COOLING	High capacity with anti-freeze -40 degrees Spin-on filter with "Need Release" element	_____



TRANSMISSION	Allison MD 4500 with PTO provision	_____
CAB	Front-end tilt hood type	_____
	AM/FM/Bluetooth Radio	_____
	Tinted glass	_____
	Intermittent Wipers	_____
	Driver Seat - Bostrum Air-Suspension Bucket type or Equal	_____
	Passenger - Fixed Seat with H.D. Vinyl	_____
	Full instrumentation gauges include hour meter & tachometer	_____
	4(min) dash mounted accessory switches	_____
	Block heater	_____
	High output heater and defroster	_____
	King-size mirrors, West-Coast type, both sides, Remote controlled/heated	_____
	Auxiliary convex mirrors, separate mounting Remote controlled and heated.	_____
HORN	Air, mounted under the hood	_____
COLOR	To match City of Billings Orange	_____
HANDLES	Cab grab handles - both sides	_____
WHEELS	Ten (10), Pilot hole 22.5 x 8.5, 10 hole budd	_____
EXHAUST	Vertical, Left or Right	_____
TIRES	Eight (8) 11 x 22.5R, 14 ply, tube-less, traction type steel radial	_____
	Two (2) 315/80R22.5, 20 ply. tube-less highway type steel radial	_____
FUEL TANK	One 45-gallon step tank	_____



BRAKES	Air-type S-cam, park brake front dual axle only; 1200 CFM Bendix Westinghouse air compressor with Cyclo - Gard Air Dryer or Bendix AD9 Air Dryer, automatic slack adjusters Rockwell or Bendix, rear dust shields or equivalent	_____
ALTERNATOR	100 Ampere	_____
BATTERY	Dual, heavy-duty, 12-volt 750 CCA, main battery dis-connect Cole Hersee #2484 or Equal.	_____
LIGHTS	LED stop/turn/tail with rear amber alternating Type flashers.	_____
	Low profile LED beacon (buyers SAE-W-07) or Equal	_____
FUEL FILTER	Racor "Filtral" with heater or equal	_____
BACK UP ALARM	OSHA approved	_____
MANUALS	One (1) complete set of operator & repair manuals including all wiring diagrams	_____
WARRANTY	Five (5) year on Engine and Transmission	_____

ONE NEW CURRENT MODEL 3000 GALLON CHEMICAL/FLUSHER LIQUID TANK
UNIT

<u>DESCRIPTION</u>	<u>MINIMUM REQUIRED</u>	<u>SPECIFICATION BID</u>
TANK	Shall be 3000 gal. horizontal leg tank with frame w/16" threaded manway 130" L x 87" W x 90" H model DTHF030 or equal.	_____
	Full length fenders over rear wheels	_____
	Drain to completely empty tank	_____
	Truck bed shall be open floor to allow Debris to fall to the ground	_____



All joints fully welded, chipped and painted _____

Sign brackets to be installed on rear of truck
Street/Traffic will install signs _____

Tank, pump system & spray bars shall allow
for installation on frame rails of a tandem
axle truck. _____

GENERAL:

Flanged Poly closed loop flow meter that is accurate + or – 1% on flows from 3 to 130 GPM with LED indicators for Power and Signal also offering tool-less flowmeter cleanout, plumbing and hardware.

LIQUID PUMP:

The product pump shall be a 200 GPM @ 40 PSI cast-iron centrifugal pump with 2" Full port flange inlet x 2" standard port outlet ports. Pump shall have a cast-iron impeller, driven by a hydraulic generated motor direct coupled to the pump, 416 stainless steel shaft to withstand corrosive environment and not harm the shaft seals. Pump housing must have integral drain ports with plugs.

PLUMBING AND HARDWARE:

Pump discharge to have Y-strainer with serviceable screen filter, recirculation valve, and flow meter. 2" flanged 12-volt electric ball valve with stainless steel ball and field replaceable actuator, which is flanged clamped for easy separation and has valve position indicator. Wear ever-possible standard port 2" flange connectors must be used to prevent leaks in the system plumbing. All mounting hardware and fasteners shall be 304 stainless steel this is to include all clamps. Tank outlet shall be a 2" poly bulkhead with a poly nipple and 2" poly full port ball valve. Glass filled Polypropylene plumbing is to be used after the main tank outlet shutoff valve and flex connection. Plumbing to incorporate loading and unloading, which includes two 2" inch polypropylene shut-off ball valve and integral male cam lock.

SPRAY BOOMS, NOZZLES, AND FLOW METER:

Three (3) -lane coverage, spray bar to be 1-1/2" schedule 40 PVC. All spray nozzles to be brass, straight stream, quick-change, mounted in 16 deg. swivel mount, which clip on to the spray boom. Spray boom to have a 5-PSI inline diaphragm check valve. Center spray boom to have (10) nozzles assemblies and shall be adjustable from 12" to 18" in height from the pavement. Side lane booms shall have up to (4) nozzle assemblies to cover the left and right lanes. Spray boom to be independently controlled by electric on/off ball valve. Flanged Poly closed loop flow meter that is accurate + or – 1% on flows from 3 to 130 GPM with LED indicators for Power and Signal also offering tool-less flowmeter cleanout, plumbing and hardware.



SPREADER CONTROL CONSOLE (5100EX):

The electronic spreader control shall include proportional controls for direct liquid functions and shall be integrated into a small, rugged, plastic injection molded control box. The direct liquid functions shall be operable in manual mode, open loop mode and closed loop mode. Direct rates shall have the ability to be adjustable inside of calibration. Materials shall be capable of being named. A security code shall be selectable in calibration to lock out undesired changes to the calibration settings. An optional supervisor USB key shall be available for quick access to the calibration menu.

The controller shall be modular in design for ease of installation and service allowing it to be mountable anywhere in the cab. A RAM mount shall be supplied to allow for easy installation and swivel capabilities. Wiring connectors shall be keyed with wiring labeled throughout. All components must be durable for long life and trouble-free operation. Spinner and spreader control dials shall be on the right side of the controller to allow for a clear view of the display while being adjusted. The enclosure shall provide a built in, protective surrounding around the spinner and spreader control knobs to prevent unintentional use and damage to the knobs.

The controller shall include off the shelf integration with PreCise brand GPS/AVL systems for advanced material logging and maintenance reporting. The controller shall also provide onboard current event and season totals for granular and prewet materials. An integrated USB port shall be used for data retrieval, firmware upgrades and for the loading and saving of calibration settings.

The controller shall include a 3.5" high brightness, color touch screen LCD with adjustable backlighting. The touchscreen shall be used for calibration only and shall not be needed during normal spreading operation. The touch screen shall allow for easy navigation of calibration menus and data viewing menus. The screen shall display warnings for oil level, oil temp, filter bypass, low granular material, low liquid material, granular and prewet feedback errors, and granular and feedback range errors. Optional audible warnings shall coincide with each visual warning and shall be individually adjustable. There shall also be a dedicated red LED on the face of the controller for an additional body up indicator. This LED shall not rely on software of the controller to operate.

The spreader control shall be supplied with a valve prewire harness. The valve harness shall be 20' feet in length and have over molded DIN type connections at the valve. The DIN connections shall have integrated gaskets and have an IP-67 rating. Separate DIN gaskets are not acceptable. Each valve output cable shall be clearly labeled with the spreader function.

The controller shall pass J1113/4, J1113/13, and J1113/21 SAE testing standards. It



shall also pass CISPR 25 IEC testing standards. It shall be capable of 9-30VDC and shall have reverse polarity and overcurrent protection. Each output must offer suppression diodes integrated into the controller.

The electronic spreader control shall be a FORCE America 5100EX or prior approved equal.

POWER TAKE OFF:

The power take off (PTO) shall be mounted to an Allison automatic 3000RDS or 4000RDS transmission. The PTO shall be a hot shift type. The PTO shall be designed to clear the integrated cooler on the Allison transmission. It shall mount like a standard side mounted PTO with an additional bracket at the rear of the transmission. The output of the PTO shall be extended past the back of the transmission where there is extra space. The main extension shaft and PTO shall be one piece to eliminate the need for input splines between the PTO and extension shaft. The clutch pack shall be located at the back of the transmission in the extension shaft. The input between the extension shaft and the pump shall be a wet spline. The PTO shall be a **Parker Chelsea 890 series** or approved equal.

PUMP:

The hydraulic pump shall be an axial piston pressure and flow compensated load-sensing type. The pump shall have a displacement of 5.61 cubic inches per revolution at maximum stroke which will deliver 23.7 GPM @ 1000 engine RPM. The pump shall have a minimum 2" inch suction line and 1/2" control drain line plumbed directly back to the reservoir. The pump's compensator shall have rear facing adjustments. The pump shall be rated for 5800 PSI maximum and 4800 PSI continuous. The pump shall have a Din type-mounting flange and a Din 5462 8-tooth shaft. The pump shall be **Force America TXV92** or prior approved equal.

SHUT DOWN SYSTEM:

The system shall be designed so that when the float contacts close, the PTO will disengage and stop pump flow. An enunciator in the cab that is on a control panel will alert the driver that the PTO has been disengaged. The control panel will also incorporate an override switch wired to de-energize the shut down system to facilitate diagnostics and equipment storage. The override panel shall also contain warning lights for body up and filter bypass. There shall also be a switch on the circuit board that will allow shutdown on high temperature condition as well as low oil.

RESERVOIR:

Hydraulic reservoir shall be (30) gallon capacity, constructed of 12-gauge pickled steel, powder coated black, 3/16" thick angle iron mounting brackets and equipped with the following:

- Basket type filler breather cap
- 3/4" Magnetic drain plug



- 2" NPT suction with 100-mesh screen type filter w/3 PSI bypass
- 5" Sight temperature gauge externally mounted
- Internal baffling
- 2" full flow brass ball valve

The hydraulic reservoir shall be equipped with an electric level or level/temperature sending unit to be wired to a panel and back lit for designated warning.

FILTER: (In Tank)

Hydraulic oil filter shall be mounted in the reservoir. Hydraulic filter shall be rated for no less than 40 GPM. Filter shall be ZINGA **model TS-1200-25-1-0 with ZSRE-409-10** micro-glass filter element and be equipped with visual filter condition indicator gauge. Filter shall also include a TD-150-PMI tank diffuser. The system shall be delivered with one spare filter element.

SPIN-A-VEYER WITH VALVE ENCLOSURE SPREADER VALVE:

The dual flow spreader valve shall control the direct liquid speeds independently via a 12 VDC pulse width modulated signal. Valve must be a mono-block design with two pressure compensated cartridges that are a single piece design with hardened cartridge bores and spools and capable of flows up to 14 GPM with pressures to 3000 PSI. Valve shall be adaptable for use with a load sensing system or open center system. A full flow adjustable relief valve must be integrated into the mono-block design. This may also serve as a main relief valve if the power beyond feature is used. A pilot relief will not be accepted. The auger/conveyor and spinner cartridges shall have heavy-duty 7/16-20 UNF screw style manual over-rides that are adjustable from no flow to full flow. Valve housing shall be made of aluminum with a gray anodizing for corrosion resistance and durability. All plumbing shall come out the bottom of the valve for ease of mounting it into an enclosure. Valve shall be a Force America Spin-A-Veyer™ valve or prior approved equal.

VALVE ENCLOSURE:

The valve assembly shall be mounted in weather-tight enclosure. The valve enclosure base shall be fabricated of 10-gauge steel and cover shall be fabricated of 14-gauge steel. The enclosure shall use gasket-less passive technology. Rubber seals, gaskets, or weather stripping of any kind is not acceptable. Valve shall be mounted with all ports coming out the bottom allowing for hose and adapter fitting connection. The use of bulkhead adapter fittings or internal plumbing is not acceptable. Valve enclosure cover shall be removable by 3 rubber latches. The use of bolts is not permitted. Valve shall be "Boxed In" with the enclosure cover and not its base.



**DUST CONTROL
APPLICATIONS**

The system shall be delivered with
Additional complete spray bars

**QUICK CHANGE
SPRAY BARS**

Both the anti-icing spray bar and the dust control spray bar shall be designed to be changed quickly and efficiently. Hose connections to the spray bar shall be made by quick connect camlock fittings.

**ADDITIONAL
CAPABILITY**

A valved manifold shall allow for filling of the tank by an independent pump and 2 inch camlock fitting, self loading of the truck's tank through a 2 inch suction hose, or filling of other tanks by a 3 inch discharge hose.

**QUICK CONNECT
CAMLOCK FITTINGS**

All fittings used to connect the reinforced suction hoses for purposes of filling, unloading and spraying shall be camlock type.

GUARANTEE

The tank shall be guaranteed for normal use for a period of five years from the date of delivery. All other components of the system shall be guaranteed for 90 days or the first winter of operation.

**ERRORS AND
OMMISSIONS**

In the event of errors and omissions of this specification it is the responsibility of the bidder to supply an operational multi-purpose liquid application system that conforms to the intent and technical requirements of this specification.

MANUALS

One complete set of operator, parts, & repair manuals



EXHIBIT B

PRICING AND ADDENDUM

Deliver to City of Billings, ONE (1) NEW CURRENT MODEL 2022, 56000 GVW CAB & CHASSIS WITH CURRENT MODEL 3000 GALLON CHEMICAL/FLUSHER LIQUID TANK UNIT per the above specifications.

Brand/Model Bid: _____

Delivery date: _____

Std Warranty	Description	\$	Price
Extended warranty	3yr - \$ _____		
	4yr - \$ _____		
	5yr - \$ _____		

ALL WARRANTY WORK SHALL BE DONE BY A COMPANY LOCATED IN BILLINGS, BIDDER SHALL STATE NAME AND LOCATION OF WARRANTY DEALER: _____

(Base bid without any quoted options): \$ _____ /each
FOB City of Billings

Trade Allowance for City
Unit #1222 1997 Freightliner chemical application unit \$ _____

(City reserves right to award bid without trade-in unit)

I/We acknowledge _____ addendum.

Company Name _____

Date _____

Contact Name (please print) _____

Title _____

Signature of Contact Position _____



By signing the above, I certify that I am authorized by the Company named above to respond to this request.